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EXAMINER

ZEWDU, MELESS NMN

ART UNIT

PAPER NUMBER

2617

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/924,885	Applicant(s) HOWARD, NEWTON	
	Examiner Meless N. Zewdu	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1,3-13 and 16-24 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-13 and 16-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This action is in response to the communication filed on 4/11/06.
2. Claims 2, 14 and 15 have been cancelled in the current amendment.
3. Claims 1, 3-13 and 16-24 are pending in this action.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: **"a wireless network for routing a signal without using a tower"** .

Claim Objections

Claims 1, 8 and 13 are objected to because of the following informalities: the word **"base"** in claim 1, line 16; claim 8, line 14 and in claim 13, line 12, need to be changed into the word, **'based'**.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 8 and 13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In this regard, “ amount of time an intermediate transceiver in the set of intermediate transceivers will be in communication with the wireless network” does not have a support in the specification.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-4, 6-9, 11-12 and 13-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Poor (US 6,028,857) in views of Sherman (US 5,974,236) and Jones et al. (US 6,108,314).

As per claim 1: Poor discloses a wireless network for transferring a signal from a source device to a destination device positioned remotely from the source device (see fig. 1; abstract) by passing the signal through a plurality of intermediate devices without using a tower (abstract; fig. 1; col. 4, lines 39-63), the network comprising:

a plurality of intermediate transceivers associated with the intermediate devices and individually operable for reproducing the signal and transmitting the reproduced signal through the intermediate devices until the reproduced signal reaches the destination device (abstract; fig. 1; col. 2, lines 31-55);

a source transceiver associated with the source device and operable for transmitting the signal to at least one of the intermediate devices (#16 fig. 1, and col. 4, lines 39-63)., and

a destination transceiver associated with the destination device and operable for receiving the reproduced signal from at least one of the intermediate devices (#16 fig. 1 , and col. 4, lines 39-63).

a routing system for determining an optimal routing path for transferring the signal from the source device through a set of intermediate devices of the plurality of intermediate devices to the destination device (see fig. 1; col. 1, lines 45-col. 4, line 20; col. 4, lines 39-63). But, Poor does not explicitly teach about indicating, in a routing path, a set of intermediate devices/nodes, as claimed by applicant. However, in a related field of endeavor, Sherman teaches about dynamically reconfigurable communications network and method, wherein a routing list/set includes ordered unique identification of the transceivers used to retransmit a message from one transceiver to

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another (see col. 2, line 63-col. 3, line 18; col. 4, lines 33-44). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the teaching of Poor with that of Sherman for the advantage of making a network versatile and self-reconfigurable without the intervention of an operator (see col. 2, lines 32-38). But, the above references do not explicitly teach about an amount of time an intermediate transceiver in the set of intermediate transceivers will be in communication with the wireless network. However, in a related field of endeavor, Jones teaches about a wireless communication system that include wireless routers for efficiently utilizing the receive/transmit switching time by determining the turn-around time of the communicating devices (see col. 10, lines 37-60; col. 11, line 66-col. 12, line 8; col. 12, lines 39-60). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to further modify the above references for the advantage of providing efficient information throughput in a wireless communication system by taking into account the receive/transmit switching times (see col. 1, lines 8-13).

As per claim 3: Poor further teaches a network, wherein the source transceiver transmits the routing scheme and the signal to the intermediate device (fig. 2-3, col. 2 lines 31-67, and col. 4 line 39-col. 6 line 15).

As per claim 4: Poor further teaches a network, wherein the routing system further comprises a data management system (fig. 2-4, col. 2 lines 31-67, and col. 4, line 39-col. 6, line 15).

As per claim 6: Poor teaches a network wherein one of the intermediate devices disconnects from a first portion of the network and reconnects to a second portion of the network (see col. 53-63). The teaching asserts that a communication device/node can change its association based on proximity. That means it avoids/disconnects distant devices in favor of the nearest ones.

As per claim 7: Hermann teaches a network further comprising a long-range transmission device for connecting the network to a remote network (see col. 1-35). PSTN is a long-range communication system to which the short-range communication system is interfaced. Furthermore, the PSTN is connectable to remote wireless/cellular system via MSC.

As per claim 8: Poor disclose a wireless network for transferring a signal from a source device to a destination device positioned remotely from the source device by passing the signal through a plurality of intermediate devices without using a tower (abstract; fig. 1; col. 4 lines 39-63), the network comprising:

a plurality of intermediate transceivers associated with the intermediate devices and individually operable for reproducing the signal and transmitting the reproduced signal through the intermediate devices until it reaches the destination device (abstract; fig. 1, col. 2 lines 31-55);

a source transceiver (#16 fig. 1) associated with the source device, wherein the source transceiver is operable for transmitting an optimal routing path for transferring the signal from the source device through at least one of the intermediate

devices to the destination device (see device (see fig. 1; col. 1, lines 45-col. 4, line 20; col. 4, lines 39-63).

a destination transceiver associated with the source device and operable for receiving the reproduced signal from at least one of the intermediate devices (#16 fig. 1, and col. 4 lines 3933). But, Poor does not explicitly teach about indicating, in a routing path, a set of intermediate devices/nodes, as claimed by applicant. However, in a related field of endeavor, Sherman teaches about dynamically reconfigurable communications network and method, wherein a routing list/set includes ordered unique identification of the transceivers used to retransmit a message from one transceiver to another (see col. 2, line 63-col. 3, line 18; col. 4, lines 33-44). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the teaching of Poor with that of Sherman for the advantage of making a network versatile and self-reconfigurable without the intervention of an operator (see col. 2, lines 32-38). But, the above references do not explicitly tech about an amount of time an intermediate transceiver in the set of intermediate transceivers will be in communication with the wireless network. However, in a related field of endeavor, Jones teaches about a wireless communication system that include wireless routers for efficiently utilizing the receive/transmit switching time by determining the turn-around time of the communicating devices (see col. 10, lines 37-60; col. 11, line 66-col. 12, line 8; col. 12, lines 39-60). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to further modify the above references for the advantage of providing efficient information throughput in a wireless communication

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system by taking into account the receive/transmit switching times (see col. 1, lines 8-13).

As per claim 9: the feature of claim 9 is similar to the feature of claim 4. Hence, claim 9 is rejected on the same ground and motivation as claim 4.

As per claim 11: the feature of claim 11 is similar to the feature of claim 6. Hence, claim 11 is rejected on the same ground and motivation as claim 6.

As per claim 12: the feature of claim 7 is similar to the feature of claim 7. Hence, claim 12 is rejected on the same ground and motivation as claim 7.

As per claim 13: Poor discloses a method of transferring a signal from a source device to a destination device positioned remotely from the source device by passing the signal through a plurality of intermediate devices forming a wireless network without a tower (abstract, fig. 1; col. 4, lines 39-63), the method comprising:

reproducing (forward) the signal using a plurality of intermediate transceivers associated with the intermediate devices (abstract, #16 fig. 1 , 01. 2, lines 31-55);

transmitting the reproduced signal through a set of intermediate devices in the plurality of intermediate devices until the reproduced signal reaches the destination device (abstract, fig. 1 , col. 4 lines 39-63);

jointly transmitting the routing path and the reproduced signal to the set of intermediate devices using a source transceiver (fig. 1 , col. 2, lines 31-65, and col. 5, lines 6-52); and

receiving the reproduced signal from the intermediate device (see fig. 1; col. 2, lines 31-65, and col. 5, lines 6-52). But, Poor does not explicitly teach about indicating, in a

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routing path, a set of intermediate devices/nodes, as claimed by applicant. However, in a related field of endeavor, Sherman teaches about dynamically reconfigurable communications network and method, wherein a routing list/set includes ordered unique identification of the transceivers used to retransmit a message from one transceiver to another (see col. 2, line 63-col. 3, line 18; col. 4, lines 33-44). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the teaching of Poor with that of Sherman for the advantage of making a network versatile and self-reconfigurable without the intervention of an operator (see col. 2, lines 32-38). But, the above references do not explicitly teach about an amount of time an intermediate transceiver in the set of intermediate transceivers will be in communication with the wireless network. However, in a related field of endeavor, Jones teaches about a wireless communication system that include wireless routers for efficiently utilizing the receive/transmit switching time by determining the turn-around time of the communicating devices (see col. 10, lines 37-60; col. 11, line 66-col. 12, line 8; col. 12, lines 39-60). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to further modify the above references for the advantage of providing efficient information throughput in a wireless communication system by taking into account the receive/transmit switching times (see col. 1, lines 8-13).

As per claim 14: the feature of claim 14 is similar to the feature of claim 13. Hence, claim 14 is rejected on the same ground and motivation as claim 13.

As per claim 15: Poor further teaches about a wireless network operable for performing the method of claim 13 (abstract, fig. 1, col. 2, lines 31-65, and col. 4 lines 39-63).

As per claim 16: Sherman teaches a network wherein an intermediate device having an intermediate transceiver operable for reproducing the signal and transmitting the reproduced signal is dynamically added to the plurality of intermediate devices in the network (see col. 2, line 32-col. 3, line 18).

As per claim 17: Sherman teaches a network wherein at least one of the intermediate devices in the plurality of intermediate devices is dynamically removed from the network (see col. 2, lines 32-38).

As per claim 18: Sherman teaches a network wherein at least one of the intermediate device is the plurality of intermediate devices is in motion for a period of time (see col. 2, lines 49-55). A mobile device can be in motion, including for a period of time.

As per claim 19: the feature of claim 19 is similar to the feature of claim 16. Hence, claim 19 is rejected on the same ground and motivation as claim 16.

As per claim 20: the feature of claim 20 is similar to the feature of claim 17. Hence, claim 20 is rejected on the same ground and motivation as claim 17.

As per claim 21: the feature of claim 21 is similar to the feature of claim 18. Hence, claim 21 is rejected on the same ground and motivation as claim 18.

As per claim 22: the feature of claim 22 is similar to the feature of claim 16. Hence, claim 22 is rejected on the same ground and motivation as claim 16.

As per claim 23: the feature of claim 23 is similar to the feature of claim 17. Hence, claim 23 is rejected on the same ground and motivation as claim 17.

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As per claim 24: the feature of claim 24 is similar to the feature of claim 18. Hence, claim 24 is rejected on the same ground and motivation as claim 18.

Claims 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references applied to claims 1 and 8 above, and further in view of Hermann et al. (Hermann) (US 6,633,757 B1).

As per claim 5: Poor further teaches a network, wherein an originating or receiving (source and destination device) can be any device connected to a network, including work stations, files servers, bridges (col. 4, lines 39-51). But, Poor does not explicitly teach about a source device that is selected from the group consisting of telephones, mobile phones, laptop computers, handheld computers, desktop computers, televisions, and automobiles, as claimed by applicant. However, in the same field of endeavor (short range communication), Hermann teaches a local communication wherein a communicating device can be any kind of communication device including telephones, mobile phones, laptop computers, handheld computers, desktop computers, televisions, and automobiles, etc. (see col. 6, lines 17-67, particularly lines 52-67). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the teaching of Poor with that of Hermann for the advantage of seamless connection in an ad-hoc local network based on service awareness of respective devices (see col. 3, line 60-col. 4, line 1).

As per claim 10: the feature of claim 10 is similar to the feature of claim 5. Hence, claim 10 is rejected on the same ground and motivation as claim 5.

Response to Arguments

Applicant's arguments with respect to claims 1-24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Meless N. Zewdu whose telephone number is (571) 272-7873. The examiner can normally be reached on 8:30 am to 5:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Banks-Harold, Marsha can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Any inquiry of a general nature relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

Meless Zewdu

Zewdu Debebe 5-8-06

Examiner

08 May 2006.